# FbF Device Listener 2.0

## Quick Start Guide

***Version:*** *0.1,* ***No:*** *DLSNR20-QS01*

***Released on:*** *August 26, 2011*

*This User Manual is intended to provide detailed information and guidance on different features and configurations of FbF Device Listener.*

*Users can read and learn how to configure FbF Device Listener to optimize its performance and how to customize it as and when needed.*

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# 1. Introduction

This User Manual is intended to provide detailed information and guidance on different features and configurations of FbF Device Listener.

Users can read and learn how to configure FbF Device Listener to optimize its performance and how to customize it as per their requirements as and when needed. To make this document short and easily accessible to users, only basic functionality and most common scenarios have been considered.

Detailed information on other prospective of FbF Device Listener can be obtained from the following sources:

1. For information on how to develop client application using FbF Device Listener, refer to *"FbF Device Listener- Developer's Guide"*.
2. For any other information, contact Fulcrum Biometrics Support Team at *support@fulcrumbiometrics.com*

## 1.1 About FbF Device Listener

FbF Device Listener is a client side application which handles all the complexity of interacting with biometrics devices on behalf of the client application. Its main objective is to keep track of all the biometrics devices connected with the host machine and listen to the client applications for below listed action requests.

1. Start\Stop capturing on a biometrics.
2. Return biometric images and templates back to client application on a successful capture.
3. List of all biometric sensors connected with machine and their capabilities.
4. Notifications whenever a biometric sensor is connected or removed from the machine.

## 2. Requirements for FbF Device Listener

FbF Device Listener is currently available for windows platform and support follow listed versions of Windows Operating Systems:

| AREA | REQUIREMENTS |
|---|---|
| **Operating System** | • Windows 7 (32 Bit and 64 Bit)<br>• Windows Vista (32 Bit and 64 Bit)<br>• Windows XP Service Pack 3 (32 Bit and 64 Bit) |
| **Processor** | Intel® Pentium® III, 450MHz or faster processor (or equivalent) |
| **Memory Requirement** | 128MB of RAM or higher |
| **Installation Footprint** | 30 MB of empty space on Hard drive |
| **Software Requirements** | Microsoft .NET 4.0 or higher |
| **Logical ports used by application** | • 943: *For Silverlight Clients Certificate Exchange*<br>• 4530: *Communication port for client application* |

# 3. Installation

FbF Device Listener can be installed on computers in two modes. Depending on the installation model you have chosen, you can jump to the corresponding section to know more about the procedure.

1. **Offline Installation:** Using application installation wizard.
2. **Online Installation:** Using Click-Once installation link.

# 4. Offline Installation

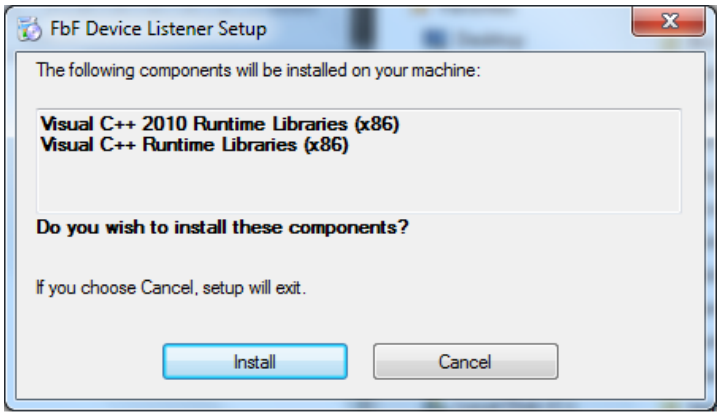
Offline installation of FbF Device listener is performed by running FbF Device Listener installation program on the target computer. Follow the list of instructions below which will guide about the complete installation process.

***Before starting the installation please make sure that you are logged in to your computer with a Windows Account having Administrative Privileges.***

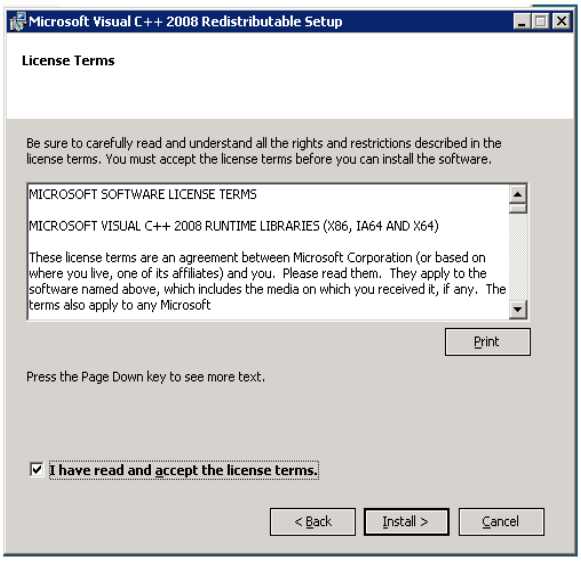
1. If you have received a download link to installation program of FbF Device Listener then download the installation program on the target computer and save it in a directory.
   If you have received a CD containing FbF Device listener installation program then simply skip this step and move to next instruction.
2. Locate and "Double Click" the file named "Setup.exe" to launch the FbF Device Listener installation program.
3. Installation program will first scan check the target computer for the FbF Device Listener Installation Pre-requisites *(required framework and other software dependencies)*. If any of the pre-requisite is not present on the target machine, setup will ask for your permission to download and install them for you automatically. Click "Install" button to continue installation.

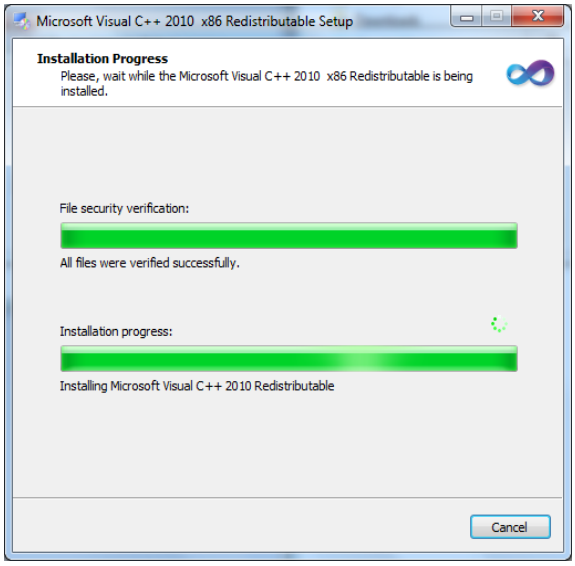
   If you wish to perform the installation of pre-requisites manually by yourself, click "Cancel" button and run the setup program again after the pre-requisite installation.

4. If you choose to download and install FbF Device Listener Pre-requisites automatically, setup program will download the latest version of setup from the internet and install it on the target machine.

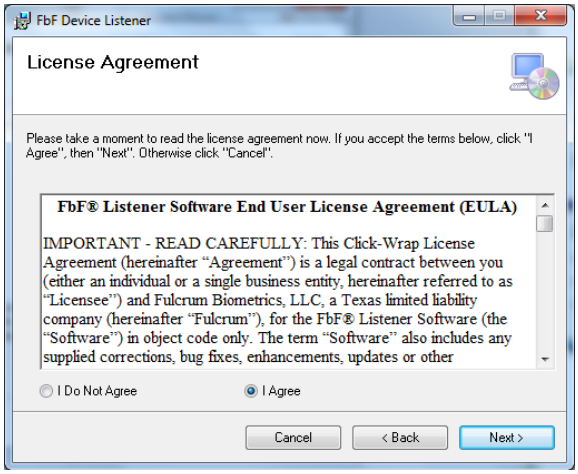

FbF Device Listener Setup
The following components will be installed on your machine:
Visual C++ 2010 Runtime Libraries (x86)
Visual C++ Runtime Libraries (x86)
Do you wish to install these components?
If you choose Cancel, setup will exit.
Install
Cancel

5. During pre-requisite installation, installer may display License Agreements for corresponding software or framework as visible in the image below. Please go through the same carefully and if you agree to it, check the checkbox to indicate your acceptance and click then next to complete the installation.

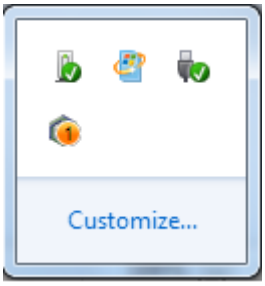

Microsoft Visual C++ 2008 Redistributable Setup
License Terms
Be sure to carefully read and understand all the rights and restrictions described in the license terms. You must accept the license terms before you can install the software.
MICROSOFT SOFTWARE LICENSE TERMS
MICROSOFT VISUAL C++ 2008 RUNTIME LIBRARIES (X86, IA64 AND X64)
These license terms are an agreement between Microsoft Corporation (or based on where you live, one of its affiliates) and you. Please read them. They apply to the software named above, which includes the media on which you received it, if any. The terms also apply to any Microsoft
Print
Press the Page Down key to see more text.
I have read and accept the license terms.
< Back
Install >
Cancel


Microsoft Visual C++ 2010 x86 Redistributable Setup
Installation Progress
Please, wait while the Microsoft Visual C++ 2010 x86 Redistributable is being installed.
File security verification:
All files were verified successfully.
Installation progress:
Installing Microsoft Visual C++ 2010 Redistributable
Cancel

6. Once the Pre-requisite installation in complete, installer will start installing FbF Device Listener. In the beginning, installer will display FbF Device Listener License Agreement. Go through it carefully and if you agree to it, check the checkbox to indicate your acceptance and click next go to the next step.


FbF Device Listener
License Agreement
Please take a moment to read the license agreement now. If you accept the terms below, click "I Agree", then "Next". Otherwise click "Cancel".
FbF® Listener Software End User License Agreement (EULA)
IMPORTANT - READ CAREFULLY: This Click-Wrap License Agreement (hereinafter "Agreement") is a legal contract between you (either an individual or a single business entity, hereinafter referred to as "Licensee") and Fulcrum Biometrics, LLC, a Texas limited liability company (hereinafter "Fulcrum"), for the FbF® Listener Software (the "Software") in object code only. The term "Software" also includes any supplied corrections, bug fixes, enhancements, updates or other
I Do Not Agree
I Agree
Cancel
< Back
Next >

7. Now follow the on screen instructions to complete the installation. Once the installation is complete, the installer will launch the FbF Device Listener. You can see the FbF Device Listener running in the system tray as visible in the image below



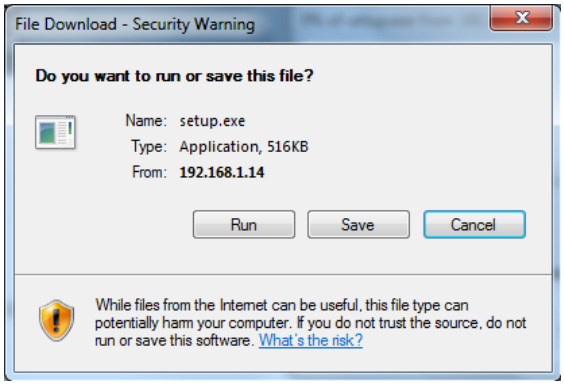
# 5. Online Installation

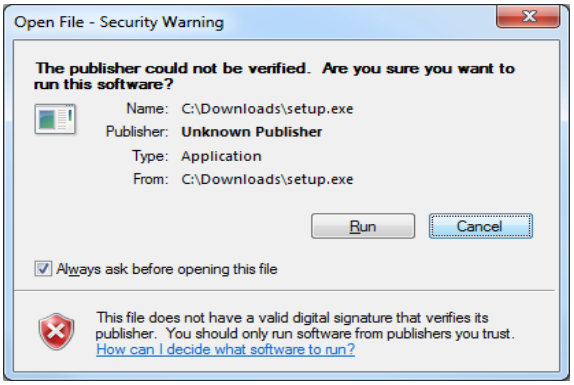
Online installation of performed using “Online installation link” provided to you at the time of purchase. Opening the online installation link will automatically start the installation of FbF Device Listener on the computer.

Follow the step by step instructions below in order perform online installation of FbF Device Listener.

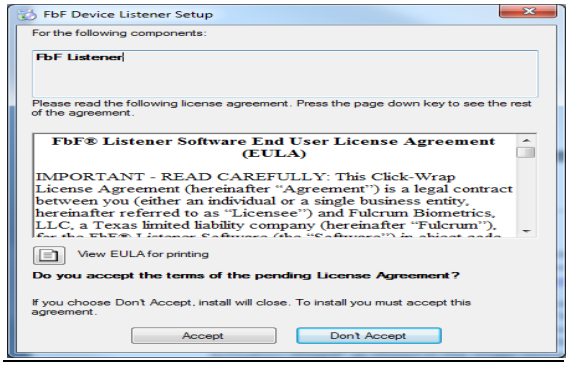
***Before starting the installation please make sure that you are logged in to your computer with an Windows Account having Administrative Privileges.***

1. Click on the Online Line installation link or copy and paste the same in the URL field of your internet browser. You will be taken to the FbF Listener Online Installation Page. Please read the instructions on the page carefully and act accordingly to start the online installation.
2. When you click install button, your internet browser will download the online installer on your machine and launch it. If you have UAC (User Account Control) turned “ON” on your Windows account, you will be shown a security warning like below. Click on the “Run” button to start the online installation.


File Download - Security Warning
Do you want to run or save this file?
Name: setup.exe
Type: Application, 516KB
From: 192.168.1.14
Run
Save
Cancel
While files from the Internet can be useful, this file type can potentially harm your computer. If you do not trust the source, do not run or save this software. What's the risk?

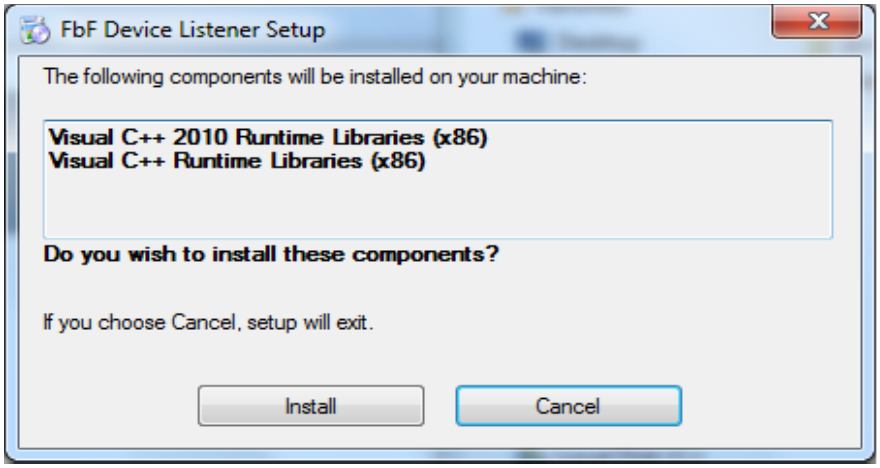

Open File - Security Warning
The publisher could not be verified. Are you sure you want to run this software?
Name: C:\Downloads\setup.exe
Publisher: Unknown Publisher
Type: Application
From: C:\Downloads\setup.exe
Run
Cancel
Always ask before opening this file
This file does not have a valid digital signature that verifies its publisher. You should only run software from publishers you trust.
How can I decide what software to run?

3. During the beginning of the online installation, installer will display “End User License Agreement (EULA)”. Please read the license agreement carefully and if you agree to it, click the “Accept” button to indicate your acceptance and continue installation.

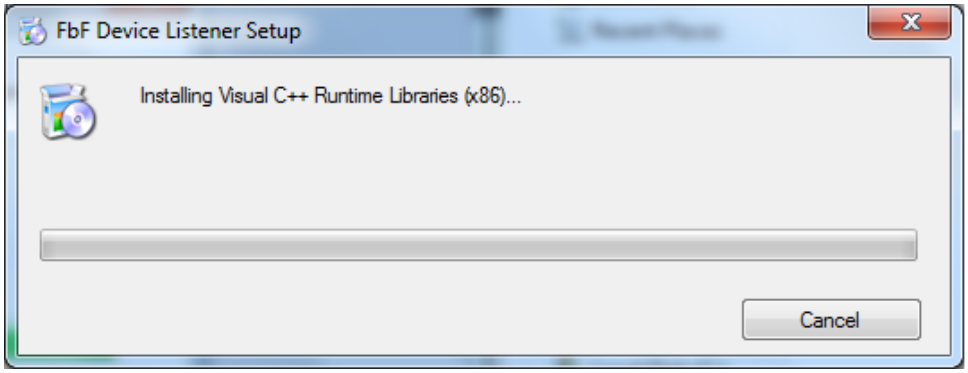

FbF Device Listener Setup
For the following components:
FbF Listener
Please read the following license agreement. Press the page down key to see the rest of the agreement.
FbF® Listener Software End User License Agreement (EULA)
IMPORTANT - READ CAREFULLY: This Click-Wrap License Agreement (hereinafter "Agreement") is a legal contract between you (either an individual or a single business entity, hereinafter referred to as "Licensee") and Fulcrum Biometrics, LLC, a Texas limited liability company (hereinafter "Fulcrum").
View EULA for printing
Do you accept the terms of the pending License Agreement?
If you choose Don't Accept, install will close. To install you must accept this agreement.
Accept
Don't Accept

4. As a second step, online installer will run a quick check on your computer for the FbF Device Listener Installation Pre-requisites *(required framework and other software dependencies)*. If any of the pre-requisite is not present on the target machine, setup will ask for your permission to download and install them for you automatically. Click "Install" button to continue installation.

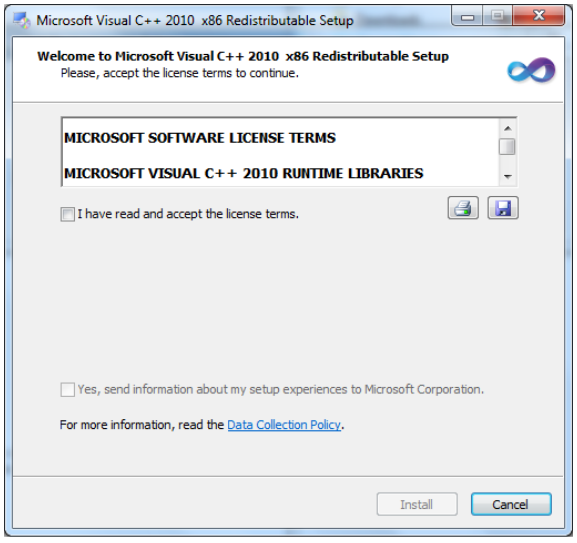
   If you wish to perform the installation of pre-requisites manually by yourself, click "Cancel" button and run the setup program again after the pre-requisite installation.

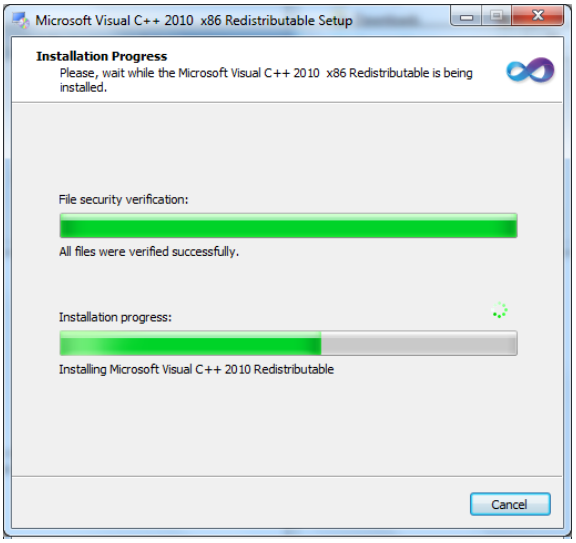

FbF Device Listener Setup
The following components will be installed on your machine:
Visual C++ 2010 Runtime Libraries (x86)
Visual C++ Runtime Libraries (x86)
Do you wish to install these components?
If you choose Cancel, setup will exit.
Install
Cancel

5. If you choose to download and install FbF Device Listener Pre-requisites automatically, setup program will download the latest version of setup from the internet and install it on the target machine.



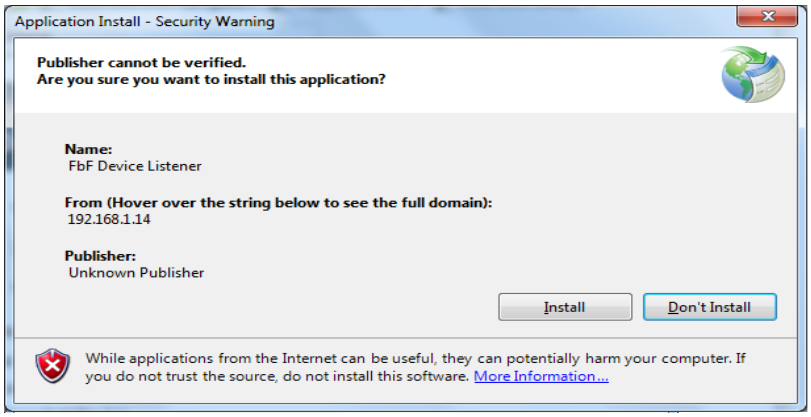

6. During pre-requisite installation, installer may display License Agreements for corresponding software or framework as visible in the image below. Please go through the same carefully and if you agree to it, check the checkbox to indicate your acceptance and click then next to complete the installation.


Microsoft Visual C++ 2010 x86 Redistributable Setup
Welcome to Microsoft Visual C++ 2010 x86 Redistributable Setup
Please, accept the license terms to continue.
MICROSOFT SOFTWARE LICENSE TERMS
MICROSOFT VISUAL C++ 2010 RUNTIME LIBRARIES
I have read and accept the license terms.
Yes, send information about my setup experiences to Microsoft Corporation.
For more information, read the Data Collection Policy.
Install
Cancel

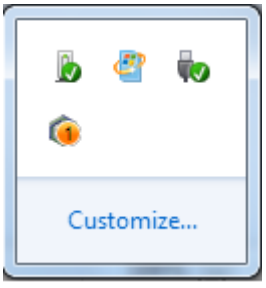

Microsoft Visual C++ 2010 x86 Redistributable Setup
Installation Progress
Please, wait while the Microsoft Visual C++ 2010 x86 Redistributable is being installed.
File security verification:
All files were verified successfully.
Installation progress:
Installing Microsoft Visual C++ 2010 Redistributable
Cancel

7. After pre-requisite installation, online installer will start installing FbF Device Listener on your machine. For security reasons, Windows will pop-up and security dialog with the information of internet source from where the installation is being done on your machine. It is recommended to the users to verify the “From” field has the same IP address\Domain as it was in the online installation link provided to them by Fulcrum Representative.

   Click “Install” button to continue installation.


Application Install - Security Warning
Publisher cannot be verified.
Are you sure you want to install this application?
Name:
FbF Device Listener
From (Hover over the string below to see the full domain):
192.168.1.14
Publisher:
Unknown Publisher
Install
Don't Install
While applications from the Internet can be useful, they can potentially harm your computer. If you do not trust the source, do not install this software. More Information...

8. Online installer will continue the installation and automatically starts the FbF Device installation once the installation will complete. Once the installation is complete, you can see the FbF Device Listener running in the system tray as visible in the image below



# 6. Post Installation Instructions

After successful installation, you should make sure of the following points for proper functioning of FbF Device Listener.

## 6.1 License Validity

Make sure that FbF Device Listener is pointing to a valid License Server. If FbF Device Listener is pointing to a wrong\invalid License Server, it will not start and will indicate the problem by changing its icon in the system tray and by displaying a notification error as visible in the table below.

| ICON TYPE | DESCRIPTION |
|---|---|
| | Listener is Idle |
| | Listener is performing startup operation |
| | Listener has detected some error |
| | Listener has finished startup operation and is ready for interaction |

# 7. Listener Un-installation

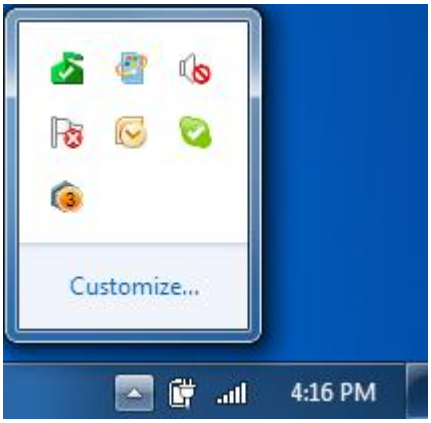
Follow the instructions listed below in order to un-install the FbF Device Listener from your machine.

1. Open the “Add\Remove Programs” option from the Control Panel and let it list all the programs installed on your machine.
2. Location and select the entry for FbF Device Listener with the name “FbF Device Listener” and click “Un-install” button to start the installation process.
3. Follow the on screen instruction to complete the process. Un-installation program may ask you to restart the machine at the end of the process. You are suggested to do so Select I order to complete the un-installation process.
   If you wish to restart later then choose the “Restart Later” option.

# 8. Feature List

FbF Device Listener has a lot of useful feature which allows user to customize the functionality and behavior of Listener. With the help of user notification and log messages, user can see and analyze all the biometric operations being performed on his computer at runtime.

FbF Device Listener runs as system tray application and can found in the system tray as visible in the image.

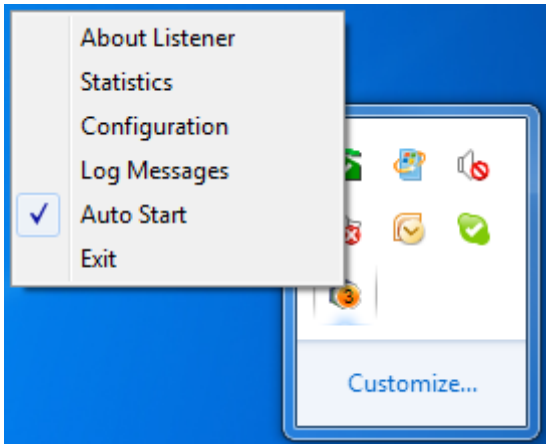



This icon not only notifies user about the important events but also allows user to access other feature and configuration of FbF Device Listener.

Users can either double click or right click on the system tray icon to access all these features.

Details of all these features are present in the forthcoming sub-sections of this document. Below is the list of the same along with system tray menu from where most of them can be accessed.

1. About Listener
2. Listener Statistics
3. Listener Configuration
4. Log Messages
5. Auto Start Feature
6. Closing Listener
7. Event Notification
8. Listener Licensing

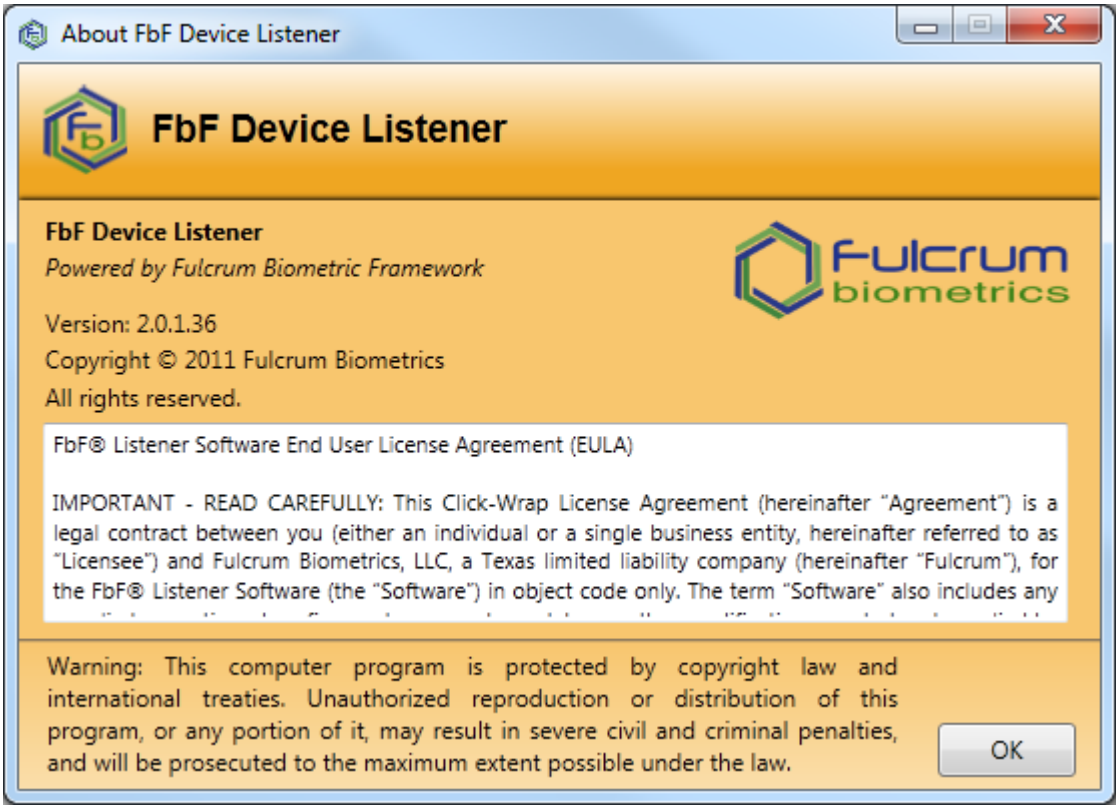


## 8.1 About Listener

"About Listener" is an information dialog which provides important information about FbF Device Listener. It can be accessed by right clicking on Listener's System Tray icon and then choosing "About Listener" option.

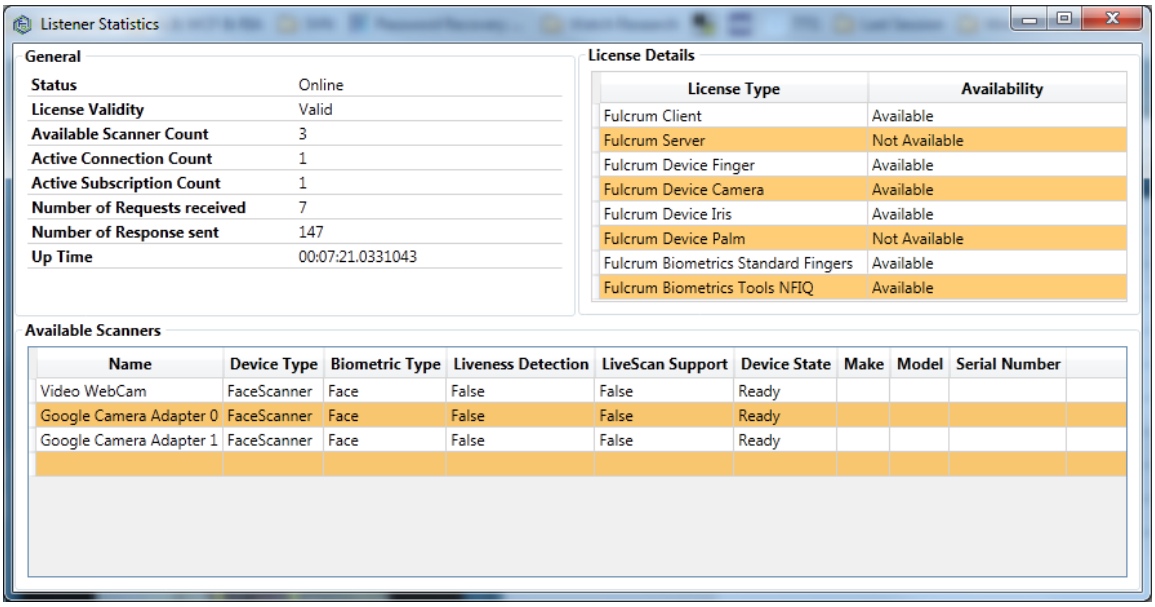
As visible in the image below, this dialog can be referred to know the following details about Listener:

1. FbF Device Listener Version Number
2. FbF Device Lisntner Copyright Information
3. FbF Device Listener EULA *(End User License Agreement).* Place your curser on the EULA and scroll down to read the complete document. It can also be copied and pasted to any word editor for printing hard copies.


About FbF Device Listener
FbF Device Listener
FbF Device Listener
Powered by Fulcrum Biometric Framework
Fulcrum biometrics
Version: 2.0.1.36
Copyright © 2011 Fulcrum Biometrics
All rights reserved.
FbF® Listener Software End User License Agreement (EULA)
IMPORTANT - READ CAREFULLY: This Click-Wrap License Agreement (hereinafter "Agreement") is a legal contract between you (either an individual or a single business entity, hereinafter referred to as "Licensee") and Fulcrum Biometrics, LLC, a Texas limited liability company (hereinafter "Fulcrum"), for the FbF® Listener Software (the "Software") in object code only. The term "Software" also includes any
Warning: This computer program is protected by copyright law and international treaties. Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under the law.
OK

## 8.2 Listener Statistics

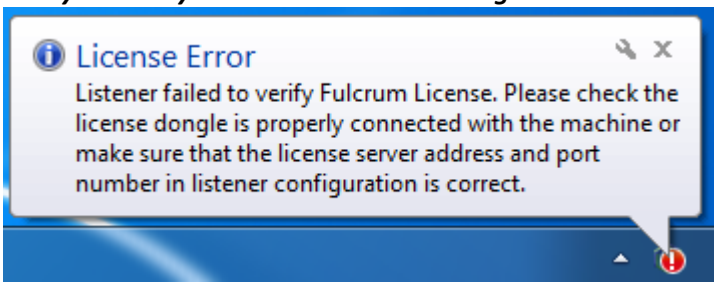
"Listener Statistics" is also an information dialog which provides complete information about Listeners state at a moment of time.


Listener Statistics
General
Status Online
License Validity Valid
Available Scanner Count 3
Active Connection Count 1
Active Subscription Count 1
Number of Requests received 7
Number of Response sent 147
Up Time 00:07:21.0331043
License Details
License Type | Availability
Fulcrum Client | Available
Fulcrum Server | Not Available
Fulcrum Device Finger | Available
Fulcrum Device Camera | Available
Fulcrum Device Iris | Available
Fulcrum Device Palm | Not Available
Fulcrum Biometrics Standard Fingers | Available
Fulcrum Biometrics Tools NFIQ | Available
Available Scanners
Name | Device Type | Biometric Type | Liveness Detection | LiveScan Support | Device State | Make | Model | Serial Number
Video WebCam | FaceScanner | Face | False | False | Ready
Google Camera Adapter 0 | FaceScanner | Face | False | False | Ready
Google Camera Adapter 1 | FaceScanner | Face | False | False | Ready

Information represented by this dialog can be divided into 3 parts which are discussed in detail below.

| **GENERAL STATISTICS** | |
|---|---|
| **Description** | Displays the current value of below mentioned vital counter of FbF Device Listener |
| **COUNTER DETAILS** | |
| **Counter Name** | **Details** |
| ***Status*** | **Online:** If Listener is online and ready for operations<br>**Offline:** If Listener is offline and will not accept any requests from client<br><br>Listener's "Offline" state indicates either some error. In this situation Listener should be closed and restarted |
| ***License Validity*** | **Valid:** If Listener has successfully acquired one or more licenses<br>**Invalid:** If Listener was not able to acquire even one license |
| ***Available Scanner Count*** | Number of Biometrics Scanner currently connected with the machine.<br>*Please note that Listener only consider and count the Biometrics Scanners supported by FBF.* |
| ***Active Connection Count*** | Number of active client connections currently being served by Listener. Please note that this value does not represents the number of client applications connected with Listener as a client application can open multiple connections with Listener if required. |

| | |
|---|---|
| ***Active Subscription Count*** | Number of active client subscriptions Listener is currently responding to. A client subscription is the request to perform a Biometric Operation.<br><br>A subscription could be of the continuous nature or it could be a self terminating subscription. |
| ***Requests Received Count*** | Total number of requests received from the client applications ever connected to Listener since it was started. |
| ***Response Sent Count*** | Total number of responses sent by Listener to the client applications ever connected to Listener since it was started. |
| ***Up Time*** | Time elapsed since the Listener was started |

| **LICENSE STATISTICS** | |
|---|---|
| **Description** | Displays the status of Licenses successfully acquired by FbF Listener. |
| **LICENSE DETAILS** | |
| **License Name** | **Details** |
| ***Fulcrum Client*** | ***Mandatory License for Listener. If this License is not present, listener will not perform any operation even if all other licenses are available.***<br><br>***In the absence of this license, Listener displays error notification from the system tray icon as visible in the image.***<br>  |
| ***Fulcrum Server*** | This license is not required by Listener |
| ***Fulcrum Device Finger*** | An optional license. This license activates all the Biometrics features of Listener related to Fingerprint scanning and processing. |
| ***Fulcrum Device Camera*** | An optional license. This license activates all the Biometrics features of Listener related to Face scanning and processing. |
| ***Fulcrum Device Iris*** | An optional license. This license activates all the Biometrics features of Listener related to Iris scanning and processing. |
| ***Fulcrum Device Palm*** | An optional license. This license activates all the Biometrics features of Listener related to Palm scanning and processing. |

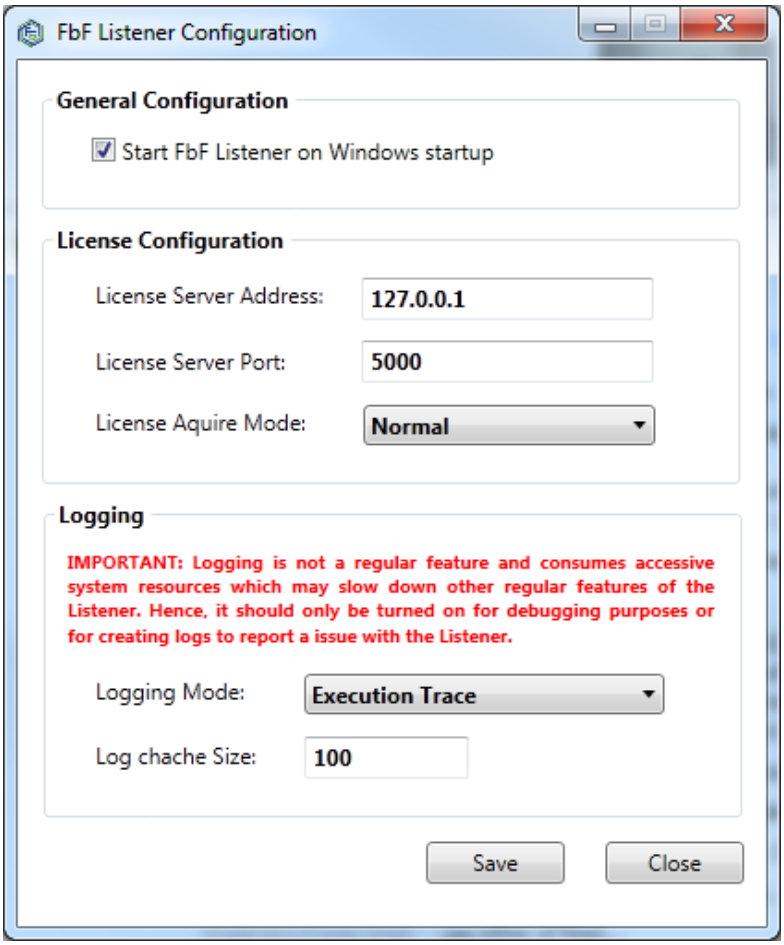
| | |
|---|---|
| ***Fulcrum Biometrics Standard Fingers*** | An optional license. This license activates all the Biometrics features of Listener related to conversion of one template format to another.<br>By default templates are generated in MMStandard format. This license allows listener to convert the templates in other standard formats like NIST, ISO and ANSII if request by the client application. |
| ***Fulcrum Biometrics Tools NFIQ*** | An optional license. This license activates all the Biometrics features of Listener related to calculation NFIQ of the finger images captured by Listener. NFIQ *(NIST Fingerprint Image Quality)* is used to rate the quality of the fingerprint images.<br><br>By default NFIQ is not calculated by Listener unless requested by the client application. |

| **DEVICE STATISTICS** | |
|---|---|
| **Description** | Displays the status of supported Biometric Devices connected with the machine. |
| **DEVICE PROPERTY DETAILS** | |
| **License Name** | **Details** |
| ***Name*** | Name of the device |
| ***Device Type*** | Biometric modality of the device. For example: Face Scanner, Finger Scanner, Iris Scaner etc |
| ***Biometric Type*** | Define which type of Biometric features can be captured with the device. For example: Face, Finger, Iris |
| ***Liveness Detection*** | Tell whether the Biometric device supports Livesness Detection or not. |
| ***Live Scan Support*** | Tells whether the Biometrics device supports Live Scanning or not. |
| ***Device State*** | Displays the current state of the Biometric device.<br>***Ready:*** Currently idle and ready to start scanning<br>***Scanning:*** Currently scanning for the requested biometric feature<br>***Stopped:*** Not scanning for any Biometrics feature. Either stopping the sensor or is in the paused states. |
| ***Make*** | Manufacturing detail defined by the manufacturer |
| ***Model*** | Model or Hardware Version of the Biometric Device |
| ***Serial Number*** | Unique Hardware Serial Number of the Biometric Device |

## 8.3 Listener Configuration

"Listener Configuration" is configuration dialog which let you tune the listener setting to achieve the desired results from Listener. Currently, there are following types of configuration available for Listener.

1. General Configuration
2. License Configuration
3. Logging Configuration


FbF Listener Configuration
General Configuration
Start FbF Listener on Windows startup
License Configuration
License Server Address:
127.0.0.1
License Server Port:
5000
License Aquire Mode:
Normal
Logging
IMPORTANT: Logging is not a regular feature and consumes accessive system resources which may slow down other regular features of the Listener. Hence, it should only be turned on for debugging purposes or for creating logs to report a issue with the Listener.
Logging Mode:
Execution Trace
Log chache Size:
100
Save
Close

**GENERAL CONFIGURATION**

If you check the option of "Start FbF Listener on Windows Startup", Listener will automatically start whenever you will start your computer.

If you want to disable this feature, you need to uncheck this option and click "Save" button to save the changes.

## LICENSE CONFIGURATION

License configuration allows users to specify the details of license server from where Listener should acquire the license. It also allows to specify the mode of license acquisition. Read below for more details.

| PARAMETER NAME | DETAILS |
|---|---|
| License Server Address | IP Address of license server. If you have the license dongle connected to your machine then you should use "127.0.0.1". |
| License Server Port | Port number at which the license server service is running. Default value for this is "5000". |
| License Acquire Mode | This parameter specifies the License acquisition mode which is used by Listener to acquire license from License Server.<br><br>**Normal:** In this mode, Listener acquires all the required licenses at the time of startup and holds them *(keep them engaged)* until Listener is shut down. Listener releases all the acquired licenses during the shutdown process.<br><br>Due to this "acquire and hold" behavior, these licenses cannot be used by any other application in the mode.<br><br>**Concurrent:** In this mode, Listener does not acquire any license during startup operation. Licenses are acquired as and when they are needed and are released immediately after the work is complete. If the required license is not available then the corresponding operation will fail and the Listener will return a appropriate error to the client application.<br><br>Due to this dynamic run time approach a concurrent license can be shared between multiple applications.<br><br>**IMPORTANT:** in order to use concurrent mode, you should have concurrent licenses with you, which are different from the regular licenses. As concurrent licenses allow sharing between clients, they are costlier than then the regular license. |

## LOGGING CONFIGURATION

Listener has a built in mechanism to log all the operation execution events as and when they happen if the logging is turned on. These logs are only useful to analyze and debug any issue or un-expected behavior observed with Listener.

***Logging is not a regular feature of Listener and consumes excessive system resources and may slow down other regular features of the Listener.***

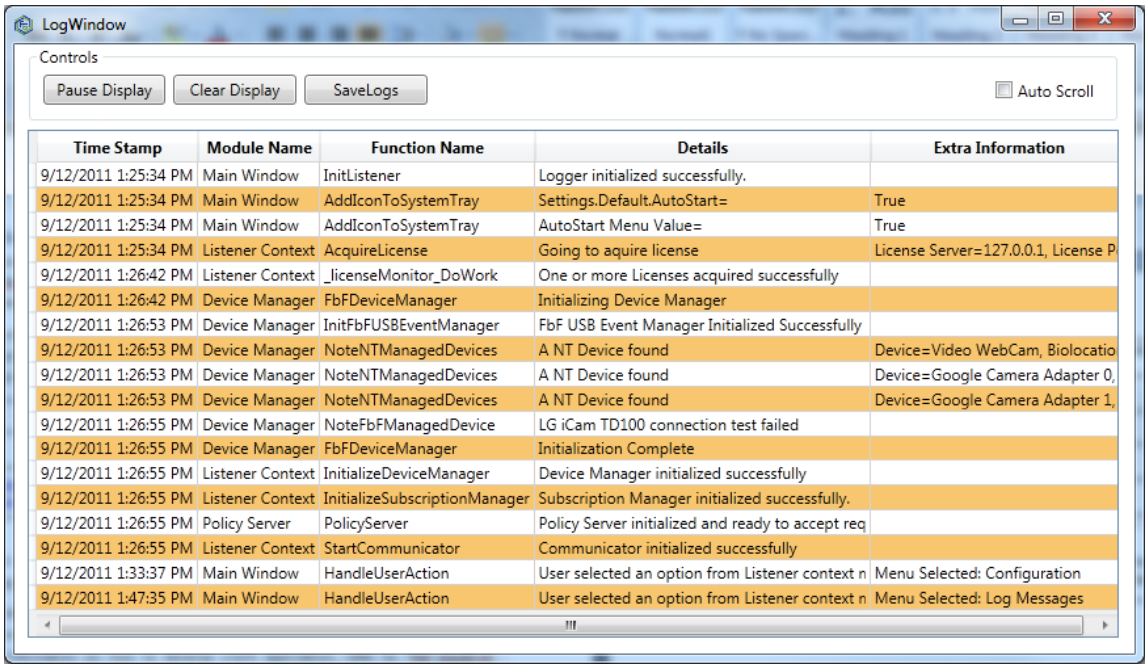
Logging can be turned on in different modes depending on how details are required in the logs. *"Logging Mode"* allows user to choose the logging mode.

| | |
|---|---|
| ***Exceptions Only*** | Only the details of exceptions occurred during any process will be logged. |
| ***Important Events*** | Only the important events and exception details will be logged |
| ***All Events*** | All events and exception details will be logged |
| ***Execution Trace*** | Complete execution trace will be logged |

*"Log Cache Size"* parameter defines the size of log buffer. If it is defined as 100 then only the last 100 log events will be kept in the memory. Any new event will overwrite the oldest log event in the memory to fit itself in the buffer size of 100.

## 8.4 Log Messages

*"Log Messages"* is an information dialog which allows you to see the logs created by FbF Device Listener. Please note that the logs will be created only when the logging is turned on.




| Time Stamp | Module Name | Function Name | Details | Extra Information |
|---|---|---|---|---|
| 9/12/2011 1:25:34 PM | Main Window | InitListener | Logger initialized successfully. | |
| 9/12/2011 1:25:34 PM | Main Window | AddIconToSystemTray | Settings.Default.AutoStart= | True |
| 9/12/2011 1:25:34 PM | Main Window | AddIconToSystemTray | AutoStart Menu Value= | True |
| 9/12/2011 1:25:34 PM | Listener Context | AcquireLicense | Going to aquire license | License Server=127.0.0.1, License P |
| 9/12/2011 1:26:42 PM | Listener Context | _licenseMonitor_DoWork | One or more Licenses acquired successfully | |
| 9/12/2011 1:26:42 PM | Device Manager | FbFDeviceManager | Initializing Device Manager | |
| 9/12/2011 1:26:53 PM | Device Manager | InitFbFUSBEventManager | FbF USB Event Manager Initialized Successfully | |
| 9/12/2011 1:26:53 PM | Device Manager | NoteNTManagedDevices | A NT Device found | Device=Video WebCam, Biolocatio |
| 9/12/2011 1:26:53 PM | Device Manager | NoteNTManagedDevices | A NT Device found | Device=Google Camera Adapter 0, |
| 9/12/2011 1:26:53 PM | Device Manager | NoteNTManagedDevices | A NT Device found | Device=Google Camera Adapter 1, |
| 9/12/2011 1:26:55 PM | Device Manager | NoteFbFManagedDevice | LG iCam TD100 connection test failed | |
| 9/12/2011 1:26:55 PM | Device Manager | FbFDeviceManager | Initialization Complete | |
| 9/12/2011 1:26:55 PM | Listener Context | InitializeDeviceManager | Device Manager initialized successfully | |
| 9/12/2011 1:26:55 PM | Listener Context | InitializeSubscriptionManager | Subscription Manager initialized successfully. | |
| 9/12/2011 1:26:55 PM | Policy Server | PolicyServer | Policy Server initialized and ready to accept req | |
| 9/12/2011 1:26:55 PM | Listener Context | StartCommunicator | Communicator initialized successfully | |
| 9/12/2011 1:33:37 PM | Main Window | HandleUserAction | User selected an option from Listener context n | Menu Selected: Configuration |
| 9/12/2011 1:47:35 PM | Main Window | HandleUserAction | User selected an option from Listener context n | Menu Selected: Log Messages |

This dialog consists of a grid and a few controls. The purpose of the grid is to display the logs in a tabular fashion for analysis. Below are the details and use of other controls present on this dialog.

| CONTROL NAME | DESCRIPTION |
|---|---|
| ***Pause Display*** | Normally, the display keeps adding the new logs on the bottom of the display and keeps removing the old logs from the top of the display in order to maintain the Log Cache Size due to which display always keeps moving. Clicking this button will pause the display which allows easy reading a analysis of a particular log |
| ***Clear Display*** | Clears all the log entries visible on the screen and in the memory |
| ***Save Logs*** | Allows you to save the logs in CSV format which can be opened in Microsoft Excel or any other CSV Editor later for reference. |
| ***Auto Scroll*** | As the new logs are added at the bottom of the screen, checking *"Auto Scroll"* button keep the screen scrolling to the bottom as the new logs are added in the table to keep visible. |

## 8.5 Closing Listener

To shut down listener, always use the “Exit” option available in the context menu of the system tray icon. Choosing “Exit” option to shut down Listener, allows it to close the all the Biometric Device and release all system memory being used by Listener.

# 9. License Server Installation

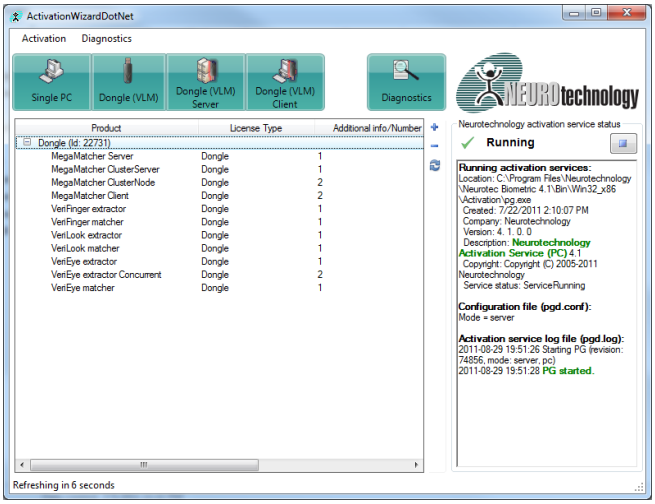
License Server is a simple program which allows hosting of licenses on the IP Address and a port number of the host machine. Client applications can send requests to License Server for desired Licenses on this IP Address and Port Number.

***In order to ensure proper functioning of a License Server, following design aspects and precautions must be considered before creating a License Server.***

1. File based Licenses cannot be used to create License Server. You must have licenses in the USB dongle to host them through a License Server and share them with clients.
2. *License Servers cannot be created on Virtual Machines which do not have access to hardware USB ports of the host machine.*

1. Download and extract the "License Installer" utility *(using link mentioned below)* in a directory on the machine where you want create the license server.
   https://backup.filesanywhere.com/fs/v.aspx?v=8a6d6a86585e6fbeac6b

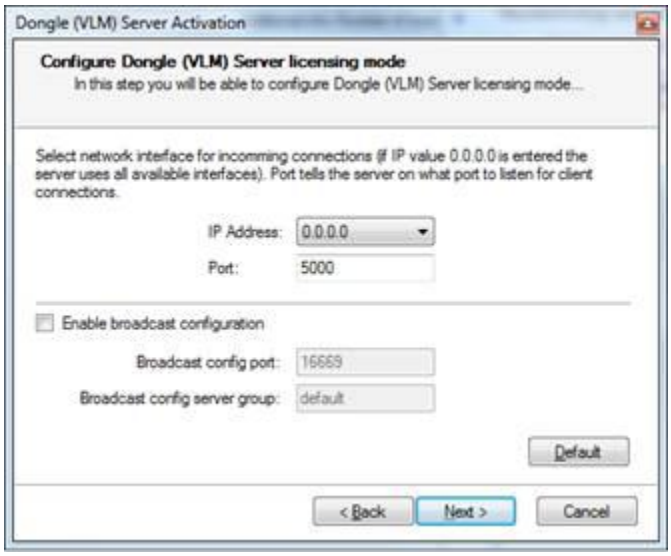
2. Plug-in the license dongle to any free USB port of the machine.



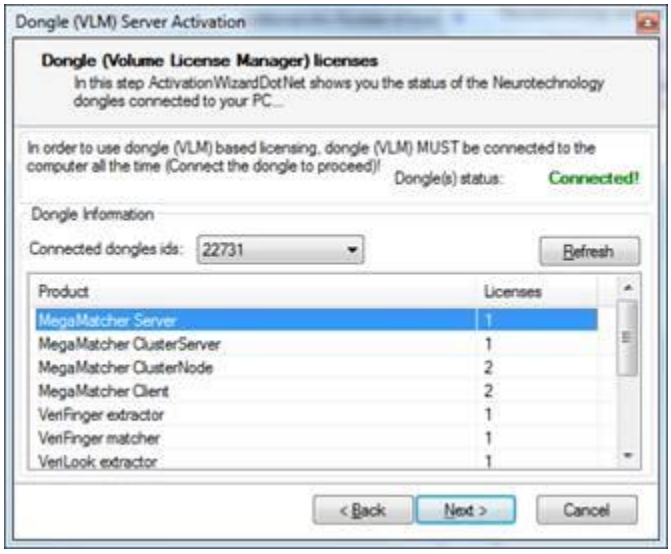

3. Open the "License Installer" directory and run "ActivationWizardDotNet.exe" file to launch the License Activation Utility. It may take 10~15 seconds to start.

4. When ActivateUtility has started, click on the "Dongle (VLM) Server" button "Dongle Server Activation Wizard" as shown in the image above.

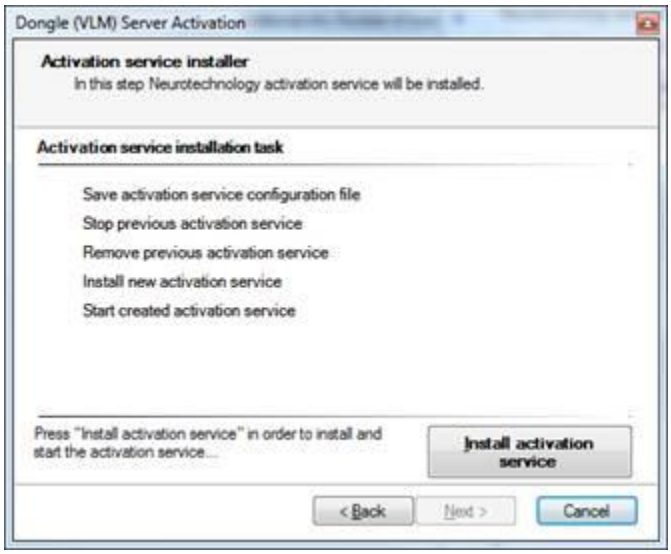
5. Click Next and fill the different fields as visible in the image and again click next to move to the next step


Dongle (VLM) Server Activation
Configure Dongle (VLM) Server licensing mode
In this step you will be able to configure Dongle (VLM) Server licensing mode...
Select network interface for incomming connections (if IP value 0.0.0.0 is entered the server uses all available interfaces). Port tells the server on what port to listen for client connections.
IP Address: 0.0.0.0
Port: 5000
Enable broadcast configuration
Broadcast config port: 16669
Broadcast config server group: default
Default
< Back
Next >
Cancel

6. Next screen will detect and read the USB dongle connected with your machine and will display all the licenses available in the dongle like visible in the image below. You license names and count may differ from what is visible in the image.


Dongle (VLM) Server Activation
Dongle (Volume License Manager) licenses
In this step ActivationWizardDotNet shows you the status of the Neurotechnology dongles connected to your PC...
In order to use dongle (VLM) based licensing, dongle (VLM) MUST be connected to the computer all the time (Connect the dongle to proceed)!
Dongle(s) status: Connected!
Dongle Information
Connected dongles ids: 22731
Refresh
Product
Licenses
MegaMatcher Server 1
MegaMatcher ClusterServer 1
MegaMatcher ClusterNode 2
MegaMatcher Client 2
VeriFinger extractor 1
VeriFinger matcher 1
VeriLook extractor 1
< Back
Next >
Cancel

7. This screen will install the License Activation Service on the machine. Simply click “Install Activation Service” button to process.


Dongle (VLM) Server Activation
Activation service installer
In this step Neurotechnology activation service will be installed.
Activation service installation task
Save activation service configuration file
Stop previous activation service
Remove previous activation service
Install new activation service
Start created activation service
Press "Install activation service" in order to install and start the activation service...
Install activation service
< Back
Next >
Cancel

8. Once the service installation in complete. You will a screen like this below. At this point your License server installation is complete and you can click “Finish” button to close the wizard.